



What is claimed:

8. (Twice Amended) A rotary piston continuous flow dynamic displacement expandable chamber device comprising a hollow toroid cylinder housing or stator with a smooth inner surface surrounding a rotor rotably mounted utilizing an attached balanced central shaft as a rotational axis, with one or a plurality of balanced pistons mounted radially on said rotor within said cylinder, an intake port with means for the attachment of an obliquely mounted intake manifold or port housing, said oblique angle relative to part of the outside circumference of the toroid cylinder, a movable conformably shaped and sized pivoting valve mounted near the opening of said intake port but before the flow channel of the accumulator where the fluid flow converges with said piston and cylinder assembly prior to the top seal point, said expandable chamber formed between said rotor, piston, smooth inner surface of the toroid cylinder, said accumulator (port area) and said valve, said valve does not ever fully close off said intake port because the fluid flows over said valve and piston in said accumulator combustor area, said valve merely isolates the piston and flow from a

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Grammar  
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retrograde course to an exhaust port by closing behind said piston immediately after said piston passes the area of said pivoting valve thereby providing continuous rotary yet compartmentalized positive displacement from a compound single cycle rotary device, [said valve with no external control also known as free acting or floating action a form of direct contact or mechanical interaction between the moving piston back and the valve face in its very simplest configuration said piston can act directly on the valve pushing it out of the way, said flow having the opposite effect on said valve pushing said valve in the opposite direction towards said sloped piston back, and said rotor thereby sealing the flow within the expandable chamber forcing it to move the pistons and turn said rotor before said fluid can travel through to said exhaust port, said exhaust port for evacuating the working fluid after it has been used.

9. (Twice Amended) A rotary piston continuous flow dynamic displacement expansible chamber device according to claim 8, wherein said pistons have a plurality of piston rings mounted in grooves of said pistons.

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10. (Twice Amended) A rotary piston continuous flow dynamic displacement expansible chamber device according to claim 9, wherein said valve and actuator are spring loaded to keep the valve pressed against said rotor and said sloped piston backs as well as said piston head so that as the said pistons travel through or under the valve said valve is maintained against said surfaces even in the absence of fluid flow.

11. (Twice Amended) An internal continuous combustion rotary engine comprising: <sup>a</sup> A rotary piston continuous flow dynamic displacement expansible chamber device comprising a hollow toroid <sup>pl</sup> cylinder housing or stator with a smooth inner surface surrounding a rotor rotably mounted utilizing an attached balanced central shaft as a rotational axis, one or a plurality of balanced pistons mounted radially on said rotor within said cylinder, <sup>where?</sup> an intake port with means for the attachment of an obliquely mounted port housing, said oblique angle relative to part of the outside circumference of the toroid cylinder, said intake port housing with

10 means for the attachment of an obliquely mounted combustor relative to  
part of the outside circumference of said toroid cylinder containing an  
C1 inner reaction cage which is a type of concentric precombustion chamber  
that produces controlled concentric or stratified flashover combustion a  
2 type of twice oxidized concentric combustion, thus said combustor having  
15 the ability of an instant two step passive compression process that is  
achieved by the novel design of its combustor and its components, said  
inner reaction cage or pre combustion chamber in which a rich mixture is  
ignited as said combustion expands to the outside of said reaction cage but  
still within the combustor more air is added to this rich ignited mixture  
and said mixture is leaned while burning, convergence of the flow into  
the cylinder area as well as reductions to its neck or nozzle by the  
accumulator and/or valve shield, and/or diffuser of said combustor further  
compress the mixture, said combustor with means for attachment of supply  
lines supplying said combustor with fuel and air and means for igniting  
25 said mixture, said combustion providing both a pressurized force and an  
impinging or impacting force on said pistons, said impinging force and  
overall device efficiency enhanced by the design incorporating oblique  
angles, a movable conformably shaped and sized pivoting valve mounted

operation  
ante  
ante

30 ante  
C1 ante  
35 ante  
40 ante  
near the opening of said combustor and said intake port but before the  
(flow channel of the accumulator) where the flow converges with said  
piston and cylinder assembly prior to (the top seal point), said expansible  
chamber formed between said rotor, piston, smooth inner surface of the  
toroid cylinder, said (accumulator port area) and said valve, said valve does  
not ever fully close off said intake port because the fluid flows over said  
valve and piston in said accumulator combustor area said valve merely  
isolates the piston and flow from a retrograde course to the (exhaust port)  
by closing behind said piston immediately after said piston passes the area  
of said pivoting valve, thereby providing continuous rotary yet  
compartmentalized positive displacement from a compound single cycle  
rotary device, said valve with no external control also known as free  
acting or floating action a form of direct contact or mechanical interaction  
between the moving piston back and the valve face in its very simplest  
configuration said piston can act directly on the valve pushing it out of the  
way, said flow or combustion having the opposite effect on said valve  
pushing said valve in the opposite direction towards said sloped piston  
back, and said rotor thereby sealing the flow within the expandable  
chamber forcing it to move the pistons and turn the rotor before said fluid

can travel through to the exhaust port said exhaust port for evacuating the working fluid after it has been used.

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12. (Twice Amended) A rotary piston continuous flow dynamic displacement continuous internal combustion engine according to claim 11, wherein said pistons have a plurality of piston rings mounted in the ring grooves of said pistons said pistons having concave tops.

note  
13. (Twice Amended) A rotary piston internal continuous combustion dynamic displacement engine according to claim 11, wherein said obliquely angled exhaust pipe or manifold has means for attaching and powering a turbo charger. Said turbocharger augmented in its start up function by a pressurized air canister or tank for supplying start up air for combustion negating the need for an electric starter.

14. (Twice Amended) A rotary piston internal continuous combustion dynamic displacement engine according to claim 11,

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wherein said valve and actuator are spring loaded to keep the valve pressed against said rotor and said sloped piston backs as well as said piston head so that as the said pistons travel through or under the valve said valve is maintained against said surfaces even in the absence of combustion or flow

15. (Twice Amended) A rotary piston internal continuous combustion dynamic displacement engine according to claim 12, wherein said toroid cylinder housing comprises water jackets and water cooling systems with means for attachment of steam extracting fittings and means for extracting steam from the process of cooling said engine and its components and utilizing said steam to aid in the process of power production either in the way and means of reintroduction of this steam into the combustor helping push the pistons or in a separate isolated process and additional device that imparts power to the common central shaft with means for the attachment of tubing and fittings to recovering said steam, cooling it, phase changing it back into liquid, circulating and reusing it.

37. (New) An internal continuous combustion rotary engine according to claim 11 wherein said valve has means for the attachment of external controls said control comprising valve pivot assemblies with means for attachment to external control levers and rotating cams that are in synchronization with the rotation of the rotor and pistons. Said lever rides on said external cam that as it turns raises and lowers the valve in synchronization with the approaching and passing of the pistons allowing the piston through yet immediately closing after it passes thus isolating said piston and said combustion confining them to the expansible chamber forcing said flow to push said piston until it reaches the exhaust port and discharges.

38. (New) A rotary piston continuous flow dynamic displacement expansible chamber device according to claim 8, wherein said valve has means for the attachment of external controls, said control comprising valve pivot assemblies with means for attachment to external control levers and rotating cams that are

Conflicts  
with  
claim 11  
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Conflicts  
with  
claim 8



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in synchronization with the rotation of the rotor and pistons,  
Said lever rides on said external cam that as it turns raises and  
lowers the valve in synchronization with the approaching and  
passing of the pistons allowing the piston through yet  
immediately closing after it passes thus isolating said piston  
and said combustion confining them to the expansible chamber  
forcing said flow to push said piston until it reaches the exhaust  
port and discharges

39.(New) A rotary piston continuous flow dynamic displacement  
expansible chamber device according to claim 9, wherein said  
valve has means for the attachment of external controls said  
control comprising valve pivot assemblies with means for  
attachment to external control levers and rotating cams that are  
in synchronization with the rotation of the rotor and pistons  
Said lever rides on said external cam that as it turns raises and  
lowers the valve in synchronization with the approaching and  
passing of the pistons allowing the piston through yet  
immediately closing after it passes thus isolating said piston

Conflict

and said combustion confining them to the expansible chamber forcing said flow to push said piston until it reaches the exhaust port and discharges

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40. (New) A rotary piston continuous flow dynamic displacement expansible chamber device according to claim 8, with means for attachment of an exhaust pipe for directing the evacuation of said exhaust fluid after it has been used.

41. (New) A rotary piston continuous flow dynamic displacement continuous internal combustion engine according to claim 11, with means for attachment of an exhaust pipe for directing the evacuation of said exhaust fluid after it has been used.